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17.0 INTERPRETATIONS

17.1 Scope

This section describes the process for manual users to request interpretations, and the committee's method for issuing interpretations. At the end of this section is a listing of all issued interpretations.

NOTE: The committee does not grant variances, exemptions or waivers to requirements. Please see Chapter 1.0 Introduction, Section 1.7.1 Variances, Exemptions and Waivers.

17.2 General

17.2.1 Submitting Request for Interpretation

The Hanford Hoisting & Rigging Committee will provide an interpretation of the requirements in the DOE-RL-92-36 Hanford Hoisting & Rigging Manual. Interpretations requests shall be submitted for presentation to committee by any of the following methods:

1. Written request sent to the Chairman, Hanford Hoisting & Rigging Committee at ^Hanford Hoisting & Rigging.
2. Written request sent to any Committee Member
3. Written request to the DOE RL Hoisting & Rigging Program Manager
4. Written request presented in person at a scheduled Hanford Hoisting & Rigging Committee Meeting when the Committee Chairman is notified by the requestor seven calendar days prior to a scheduled meeting.

17.2.2 Formatting Request for Interpretation

The written request for interpretation shall be clear and unambiguous. It is further required that the requester submit his request utilizing the following format.

1. **Subject:** Cite the applicable chapter and paragraph number and provide a concise description.
2. **Question:** Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for approval of a proprietary design or situation. The inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain any proprietary names or information.

Requests that are not in this arrangement will be rewritten in this format by the Committee prior to being answered, which could change the intent of the original request.

17.2.3 Committee Response to Request for Interpretation

Response to interpretations will be provided via email to the requester when approved by the committee. Publication of interpretations will occur at the time of with next published release

of the manual. Interpretations will be removed from this section if the manual is revised to address the interpretation. When the committee considers it necessary it may request guidance or an interpretation of the applicable 29 CFR's, National Consensus Standards, or DOE Orders/Standards.

17.3 Published Interpretations

Interpretations are listed in order of related chapter and date issued.

17.3.1 Chapter 1.0 Introduction

Interpretations: None

17.3.2 Chapter 2.0 Responsibilities

Interpretations: None

17.3.3 Chapter 3.0 Critical Lifts

Interpretations: None

17.3.4 Chapter 4.0 Personnel Qualifications and Training Requirements

Interpretations:

July 28, 2000 - Question 1: – HHRM section 4.8.15(2), does this section mean that on the job evaluators (OJE) must be experienced/qualified operators of the equipment (or subject area) covered in the evaluation?

Answer 1: The OJE sections of Chapter 4 have been re-written to clarify the qualifications required for On-the-Job Evaluators.

Section 4.3.2.15 **On-the-Job Evaluator** now states: On-the-job evaluators shall have the technical information on the subject area of evaluations, be qualified to perform on-the-job-evaluations of proper operator actions, and should be trained in the following:

1. Evaluation techniques
2. Test administration
3. Performance evaluation
4. Use of OJE forms
5. Records management

Section 4.3.5 **Qualification** now states: Personnel shall be considered qualified when they accomplish the following:

1. Satisfactorily complete training or meet the requirements of previous training (see Section 4.3.1)
2. Pass a written/oral examination of the knowledge requirements for the applicable activity.
3. Satisfactorily complete equipment specific OJT for OJT instructors, on-the-job evaluators, and equipment operators. Management may determine that previous qualification or experience fulfills this requirement.
4. Pass an equipment specific OJE for OJT instructors, evaluators, and equipment operators.

Section 4.3.6.2 **Requalification Methods** now states: Personnel performing the following activities may be requalified by the methods indicated. Personnel, who do not satisfactorily complete requalification by an identified method, shall complete training as listed in Sections 4.3.1.3:

Item # 8 of this section now states: On-the-job training or evaluation of personnel. – Note: - On-the-job Trainers and Evaluators must maintain and demonstrate both their instructional proficiency and technical proficiency. See the Hoisting and Rigging Training Program Description Section 4.4.4.5, and Attachment 2 for examples of a flow path of this process.

17.3.5 Chapter 5.0 Hooks

Interpretations: None

17.3.6 Chapter 6.0 Forklift Trucks

Interpretations:

September 13, 2005 - Question 1: What is the specific allowable percentage of grade for side-slope operation across an incline for safe operation of a forklift? For example, a road has a crown for water drainage, which presents a cross slope operation to a forklift. References- DOE-RL-92-36, Chapter 6: "Common Errors during Forklift Operation: Failing to keep the load "uphill" when traveling on ramps or grades."

HYSTER OPERATING MANUAL, page 38: "WARNING: Do not turn on an incline. To reduce the possibility of a tip over, a lift truck must not be driven across an incline."

Answer 1: Slight grades are not an issue such as crowns in roadways. Grades that can affect the stability are and should be of high concern as they may result in forklift overturning and death or serious injury to the operator. Please see the Forklift Hazard Evaluation Checklist- (This should be used for all forklift operations) Site form A-6002-924 and the example in

DOE-RL-92-36 Chapter 6, page 7. You will see the item that identifies docks, grades and ramps >5%. If the manufacture has a lower limit it must be followed and would take president over our general rule.

If the grade > 5% or > than a % of grade established by the specific lift manufacture we must go vertically up and down the grade or put our operators at risk. The issue of grade needs to also take into consideration these additional items that can make the manufacturer established grades or grades of less than 5% dangerous:

- The type and class of forklift being used
- The surface condition-paved dirt ground
- The truck is loaded or unloaded- if loaded where is the center of gravity of the load
- How the truck is operated on the grade- such as turning.

July 28, 2005 – Question 1: Is it allowable to partially lift/drag a container from the center of a trailer to the side of the trailer to allow further offloading?

Answer 1: It is an acceptable practice to partially lift and re-position a load so the lift can fully engage the load as long as the lift operator ensures the forklift does not become unstable or the integrity and stability of the load is not compromised. When the load is fully lifted to remove from the truck, it must be within the forklifts capacity at the given load center of the load.

17.3.7 Chapter 7.0 Shop Cranes

Interpretations: None

17.3.8 Chapter 8.0 Wire Rope

Interpretations: None

17.3.9 Chapter 9.0 Slings

Interpretations: None

17.3.10 Chapter 10.0 Rigging Hardware

Interpretations: None

17.3.11 Chapter 11.0 Below The Hook Lifting Devices

Interpretations:

Date Unknown - Question (1): With regard to DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual, Section 11.3.1, Design Factor, is it the intent of this section to require fasteners performing as structural components of a lifter be designed so that the static stress

resulting from the rated load and the weight of the lifter does not exceed 33% of the yield strength of the material?

Answer 1: Yes, The design factor of 3 is a relationship between the structural component (in this case the fasteners) material yield strength and the static stress imposed by the rated load and the weight of the lifter.

Date Unknown - Question (2): If the response to question (1) is yes, can fasteners be designed and pretension in accordance with applicable industry codes and standards without pretension stress becoming a factor in meeting the 33% of yield strength of the material criteria described in question (1)?

Answer 2: Yes, fastener pre-tension stress is not one of the stress factors in the design factor of 3 determination criteria.

September 21, 2004 - Question 1: Do the service classifications and PM/inspection frequency requirements provided in the Hanford Site Hoisting and Rigging Manual (based on ASME B30.20) apply to a "below-the-hook" lifting device when ANSI N14.6 has been imposed on that device by the responsible engineer/facility?

- Rigging Manual section 11.7 requires weekly to monthly frequent and semi-annual visual inspection for heavy service.
- ANSI N14.6 section 6.3 requires only annual load testing with visual inspections or alternatively allows special inspection, which includes NDE (Magnetic Particle).

Answer 1: The HHRM section 11.2.2 Special Lifting Devices allows for the responsible engineer or design authority to invoke ANSI N14.6 for Design, Fabrication, Acceptance Testing, Maintenance, Assurance of continuing compliance, Inspection and Marking. The responsible engineer would determine the need to apply elements of ASME B30.20 such as the service classification but would not be required to when that element of ANSI N14.6 is applied such as inspection criteria.

April/1/2003 - Question 1: Are electrical switchgear (circuit breaker) lifting devices, designed, built and supplied by breaker manufacturer for handling his circuit breakers considered Below the Hook Lifting devices as defined in DOE-RL-92-36 Section 11 and ASME B30.20?

Answer 1: No. These circuit breaker lifting devices designed, built and supplied specifically for lifting the manufactures breakers are considered “Proprietary Lifting Devices” and do not meet criteria of lifting devices for freely suspended loads as defined in DOE-RL-92-36 Section 11 and ASME B30.20?

June 21, 2006 – Question 1: Is a hook such as referenced in Chapter 11.0, Attachment 11.1-5; when attached directly to the load block hook of a crane or hoist considered a below-the –hook device?

Answer 1: Yes. The hook shaped device shown is classified as a Below-the-Hook Lifting Device and as such must comply with the requirements of ASME B30.20 Below the Hook Lifting Devices as required by Chapter 11, Section 11.7.1.

Question 2: If a hook, covered in Chapter 10 Rigging Hooks or Chapter 5 Hooks was attached directly to a load block hook would it then become a Below-the-hook lifting device?

Answer 2: No. The hooks covered in Chapter 10, Riggings Hooks and Chapter 5 Hooks, of the Hanford Hoisting & Rigging Manual are designed and built to the requirements of ASME B30.10 Hooks and not ASME B30.20 Below the Hook Lifting Devices. The determination of which standard is applicable, is based on which standard the device is built too and not it's use or application in a rigging system.

17.3.12 Chapter 12.0 Hoists, Jib Cranes, and Monorail Systems

Interpretations: None

17.3.13 Chapter 13.0 Overhead and Gantry Cranes

Interpretations:

July 15, 2004 - Question 1: Can the frequent and daily inspection listed in HHRM, section 13.9.1.3.and HHRM, section 13.9.1.2 be consolidated into a one (daily) inspection to take credit for the frequent and daily inspection. We could just call the first day of the month the frequent inspection. I have been told that some facilities do it that way. Is the HHRM requirement such that we would have to write a new OP to perform the frequent inspection for the month?

Answer 1: As long as you cover those requirements for daily and frequent listed in the HHRM (there are some differences and you must ensure they are all completed) you could consolidate to one procedure and take credit for it.

Question 2: What qualifications are required to perform frequent and daily inspection listed in HHRM, Section 13.9.1.3.and Section 13.9.1.2

Answer 2: It does not require a "qualified inspector" to perform Frequent and Daily visual and operation checks of the crane. A qualified operator may perform these. They are observations for visual damage or malfunctions.

February 09, 2005 - Question 1: Is section 13.8 of the DOE-RL-92-36 requiring "*A re-rated crane or one whose load-supporting components have been modified **shall** be subjected to a rated load test (see paragraph 13.9.3.4, "Rated Load Test")* applicable to **up-rating cranes only** and not the down-rating of cranes?

Answer 1: If the re-rating is for other than administrative proposes and we have re-rated because of some physical condition of the crane components or supporting structure then we must load test. The new rating needs to be supported by engineering analysis.

17.3.14 Chapter 14.0 Mobile Cranes

Interpretations:

April 29, 2005 - Question 1: Does project management mean somebody from the rigging crew preferably the designated leader, or does it mean anyone within management over a particular construction activity?

14.4.7.5 When Power Lines are Energized, a mobile Crane is Operating Within the Erected/Fully Extended Boom Length of the Prohibited Zone (Crane has the capacity to boom down, swing or extend into the prohibited zone an onsite meeting between project management and a qualified representative of the owner of the power lines or a designated representative of the electrical utility shall take place to establish the conditions to safely complete the operations

Answer 1: The intent is that the supervisor or person responsible for the crane crew and is involved in the crane activity be at that meeting, it could be a DL. This is the person who is responsible for the crane crew and activities, understands crane configurations, capabilities and is responsible for implementing those items listed in 14.4.7.5.b-j and 14.4.7.6 a-g. Facility or Organization where the activity is taking place wishes to have a representative at the meeting that would be good.

Question 2: Does the definition 14.4.7.6 a., "a qualified person responsible for crane operations" mean a designated leader, crane operator, rigger, or the crane supervisor, or does it mean anyone within management over a particular construction activity?

14.4.7.6 Crane Operations Within the Prohibited Zone and the Power Lines are Energized.

CAUTION: Working in the prohibited zone with power lines energized requires very disciplined and extraordinary safety precautions, including direct involvement and support from the electric utility organization. Working in the prohibited zone with power lines energized, shall only be performed when no alternative exists.

a. Before such operations take place, a qualified person responsible for crane operations and a qualified representative of the utility or an engineer qualified in power line transmission, after visiting the site together, shall determine whether operating the crane within the Prohibited Zone is the most feasible way to complete the job. Both persons shall set minimum required clearances and procedures for safe operations. These operations shall be under their supervision.

Answer 2: See Answer 1

June 21, 2006 Question 1--Is it the intent of 14.4.7.4.b that only transmission & distribution lines be grounded to avoid electrical feedback or to become re-energized from other sources and not insulated overhead premises wiring installed in accordance with the National Electrical code (NEC).

14.4.7.4.b The lines shall be visibly grounded to avoid electrical feedback and appropriately marked at the job-site location.

Answer 1: Yes, as long as the premises line voltage does not exceed 480 volt, factory-installed insulation is on the conductor and the insulation would not be damaged while doing the work.

Question 2--If an electrically safe work condition has been established, i.e., the circuit has been locked out in accordance with 29 CFR 1910.147, including authorized worker locks belonging to the crane operator and assisting workers, will that satisfy the intent of 14/4/7/4.b for insulted premised wiring lines?

Answer 2: No, The requirements 29CFR 1910.147 are required regardless of grounding issues.

14.3.e (1) e. Before leaving the crane unattended, perform the following tasks:

(1) Land any load, bucket, lifting magnet, or other device

June 21, 2006 Question 1: When and under what conditions is it acceptable for a mobile crane operator to leave his/her position at the crane controls with a load suspended"?

Answer 1: If a condition arises that puts the mobile crane operator's life or health at risk by remaining in the cab with (or without) a load suspended, he/she shall leave the crane cab. It is also important that anytime there is a known possibility that a condition could arise during the course of a work assignment requiring the operator to leave a crane with the load suspended, it must be addressed with the assigned designated leader and the crane operator prior to commencement of the work, as a part of pre-job planning.

If there is no threat to the life or health of the crane operator, then the operator should not leave a crane with the load suspended. Leaving a load suspended from an unattended mobile crane is a hazardous practice and should never be implemented for convenience. To leave a mobile crane unattended with a suspended load, other than in a situation where the operator's life or health is threatened, there must be an analysis completed by qualified hoisting and rigging personnel to identify manufacturer-specific recommendations as well as implement actions and methods to mitigate the hazards. The analysis shall be based on, as a minimum, the operating characteristics and limitations of the specific crane and the following elements that may affect load, crane stability and cranes structural integrity;

- Crane footing
- Load weight,
- Load radius
- Physical dimensions and shape of the load
- Criticality of the load and it's surroundings per chapter 3 of the DOE-RL-92-36 Hoisting and Rigging Manual
- Crane capacity
- Crane condition
- Current and predicted weather conditions
- Effects on rigging, rigging hardware and lifting devices, if used
- Load stability
- Estimated time crane with suspended load will be left unattended

In most cases the safest and most expedient method is to leave the operator at the controls until the load can be landed. If after analysis it is determined that the load will be left suspended without the operator in the cab then the applicable requirements of DOE-RL-92-36, Sections 14.3 and 14.4, and mitigating actions identified from the analysis shall be applied. As a minimum control, the affected area shall be cordoned off to prevent personnel access into the work zone.

17.3.15 Chapter 15.0 Personnel Lifting

Interpretations: None

17.3.16 Chapter 16.0 A-Frames and Trolleys

Interpretations: None

17.3.17 Chapter 17.0 Interpretations

Interpretations:

17.3.18 Chapter 18.0 Hoisting & Rigging in Hostile Environments

Interpretations: None

17.3.19 Chapter on Hold

Interpretations: None

17.3.20 H&R Committee Charter

Interpretations: None

17.3.21 References and Bibliography

Interpretations:

January 21, 2004 - Question 1: Does "monthly" and "annually" when applied to documented inspections of equipment covered by the Hanford Hoisting and Rigging Manual, such as wire rope and cranes, mean if these inspection are not performed 30 days or 365 days respectively from the previous inspection the equipment is out of service?

Answer 1: Required monthly and annual inspections need to be performed once each calendar month and once each calendar year to as close to the exact date (30 or 365 days from previous date) as possible allowing for variances for weekends and work schedules. As long as the inspection is performed in the month it was due the equipment is not out of service. Monthly inspections could, on occasion be performed early in one month and late in the next, but if this were a common practice it would not be meeting the intent of the law or requirement.

Question 2: Is there a "grace period"?

Answer 2: There is no grace period.